Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1-19. (cancelled).

20. (currently amended) A method of screening for an agonist or an antagonist of PTH receptor activity comprising:

(a) contacting cells with a test compound wherein said cells express a rΔNt [[rδNt]] polypeptide having an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

(i) the amino acid sequence from about position 1 to about position 435 in SEQ ID NO:2, wherein the extracellular amino-terminal ligand binding domain is deleted;

(ii) the amino acid sequence from about position 2 to about position 435 in SEQ ID NO:2, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iii) the amino acid sequence from about position 23 to about position 435 in SEQ ID NO:2, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iv) the amino acid sequence of the rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No.

PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted; and

(v) the amino acid sequence of the mature rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted;

wherein said polypeptide increases intracellular cAMP levels when activated by PTH or PTH-related peptide extracellular amino-terminal ligand binding domain has an amino acid sequence from about residue 26 to about residue 181 in wild-type PTH receptor;

(b) measuring cAMP accumulation in said cells; and

(c) determining whether said test compound is an agonist or an antagonist of PTH receptor activity;

wherein an agonist is identified as a compound that increases cAMP accumulation and an antagonist prevents cAMP accumulation.

21. (cancelled).

22. (previously presented) The method of claim 20, wherein said agonist is a peptide.

23. (previously presented) The method of claim 20, wherein said antagonist is a peptide.

24. (currently amended) A method of screening for an agonist or an antagonist of PTH receptor activity comprising:

(a) contacting cells with a test compound wherein said cells express a rΔNt [[rδNt]] polypeptide, wherein said cells comprise a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(i) a nucleotide sequence ~~encoding the amino acid sequence~~ from about position 1 to about position 1320 in SEQ ID NO:1 ~~435 in SEQ ID NO:2~~, wherein the extracellular amino-terminal ligand binding domain is deleted;

(ii) a nucleotide sequence ~~encoding the amino acid sequence~~ from about position 4 to about position 1320 in SEQ ID NO:1 ~~2 to about position 435 in SEQ ID NO:2~~, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iii) a nucleotide sequence ~~encoding the amino acid sequence~~ from about position 67 to about position 1320 in SEQ ID NO:1 ~~23 to about position 435 in SEQ ID NO:2~~, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iv) a nucleotide sequence encoding the rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted; and

(v) a nucleotide sequence encoding the mature rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in

ATCC Deposit No. PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted;

wherein said polypeptide increases intracellular cAMP levels when activated by PTH or PTH-related peptide extracellular amino-terminal ligand binding domain has an amino acid sequence from about residue 26 to about residue 181 in wild-type PTH receptor;

(b) measuring cAMP accumulation in said cells; and

(c) determining whether said test compound is an agonist or an antagonist of PTH receptor activity;

wherein an agonist is identified as a compound that increases cAMP accumulation and an antagonist prevents cAMP accumulation.

25. (currently amended) A method of screening for an agonist or an antagonist of PTH receptor activity comprising:

(a) contacting cells with a test compound wherein said cells express a rΔNt [[rδNt]] polypeptide having an amino acid sequence selected from the group consisting of:

(i) the amino acid sequence from about position 1 to about position 435 in SEQ ID NO:2;

(ii) the amino acid sequence from about position 2 to about position 435 in SEQ ID NO:2;

(iii) the amino acid sequence from about position 23 to about position 435 in SEQ ID NO:2;

(iv) the amino acid sequence of the rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136; and

(v) the amino acid sequence of the mature rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136;

wherein said polypeptide comprises a deletion of the extracellular amino-terminal ligand binding domain of a PTH-1 receptor, said extracellular amino-terminal ligand binding domain having an amino acid sequence from about residue 26 to about residue 181 in wild-type PTH receptor;

(b) measuring cAMP accumulation in said cells; and

(c) determining whether said test compound is an agonist or an antagonist of PTH receptor activity;

wherein an agonist is identified as a compound that increases cAMP accumulation and an antagonist prevents cAMP accumulation.

26. (currently amended) A method of screening for an agonist or an antagonist of PTH receptor activity comprising:

(a) contacting cells with a test compound wherein said cells express a rΔNt [[rδNt]] polypeptide, wherein said cells comprise a polynucleotide having a nucleotide sequence selected from the group consisting of:

(i) a nucleotide sequence encoding the amino acid sequence from about position 1 to about position 435 in SEQ ID NO:2;

(ii) a nucleotide sequence encoding the amino acid sequence from about position 2 to about position 435 in SEQ ID NO:2;

(iii) a nucleotide sequence encoding the amino acid sequence from about position 23 to about position 435 in SEQ ID NO:2;

(iv) a nucleotide sequence encoding the rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136; and

(v) a nucleotide sequence encoding of the mature rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136;

wherein said polypeptide comprises a deletion of the extracellular amino-terminal ligand binding domain of a PTH-1 receptor, said extracellular amino-terminal ligand binding domain having an amino acid sequence from about residue 26 to about residue 181 in wild-type PTH receptor;

(b) measuring the biological response of cAMP accumulation in said cells; and

(c) determining whether said test compound is an agonist or an antagonist of PTH receptor activity;

wherein an agonist is identified as a compound that increases cAMP accumulation and an antagonist prevents cAMP accumulation.

27. (currently amended) A method of screening for an agonist or an antagonist of PTH receptor activity comprising:

(a) providing an iodinated test compound;

(b) contacting cells with said iodinated test compound wherein said cells express a rΔNt [[rδNt]] polypeptide, wherein said cells comprise a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(i) a nucleotide sequence ~~encoding the amino acid sequence~~ from about position 1 to about position 1320 in SEQ ID NO:1 ~~435 in SEQ ID NO:2~~, wherein the extracellular amino-terminal ligand binding domain is deleted;

(ii) a nucleotide sequence ~~encoding the amino acid sequence~~ from about position 4 to about position 1320 in SEQ ID NO:1 ~~2 to about position 435 in SEQ ID NO:2~~, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iii) a nucleotide sequence ~~encoding the amino acid sequence~~ from about position 67 to about position 1320 in SEQ ID NO:1 ~~23 to about position 435 in SEQ ID NO:2~~, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iv) a nucleotide sequence encoding the rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted; and

(v) a nucleotide sequence encoding the mature rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted;

wherein said polypeptide increases intracellular cAMP levels when activated by PTH or PTH-related peptide extracellular amino-terminal ligand binding domain has an amino acid sequence from about residue 26 to about residue 181 in wild-type PTH receptor; and

(b) determining whether said iodinated test compound competitively binds to said rΔNt [[rδNt]] polypeptide;

wherein an agonist is identified as a compound that increases cAMP accumulation and an antagonist prevents cAMP accumulation.

28. (currently amended) A method of screening for an agonist or an antagonist of PTH receptor activity comprising:

(a) providing an iodinated test compound;

(b) contacting cells with said iodinated test compound wherein said cells express a rΔNt [[rδNt]] polypeptide having an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

(i) the amino acid sequence from about position 1 to about position 435 in SEQ ID NO:2, wherein the extracellular amino-terminal ligand binding domain is deleted;

(ii) the amino acid sequence from about position 2 to about position 435 in SEQ ID NO:2, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iii) the amino acid sequence from about position 23 to about position 435 in SEQ ID NO:2, wherein the extracellular amino-terminal ligand binding domain is deleted;

(iv) the amino acid sequence of the rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted; and

(v) the amino acid sequence of the mature rΔNt [[rδNt]] polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-1136, wherein the extracellular amino-terminal ligand binding domain is deleted;

wherein said polypeptide increases intracellular cAMP levels when activated by PTH or PTH-related peptide extracellular amino-terminal ligand binding domain has an amino acid sequence from about residue 26 to about residue 181 in wild-type PTH receptor; and

(b) determining whether said iodinated test compound competitively binds to said rΔNt [[rδNt]] polypeptide;

wherein an agonist is identified as a compound that increases cAMP accumulation and an antagonist prevents cAMP accumulation.